



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0338; Directorate Identifier 2014-CE-010-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Piper Aircraft, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Supplemental notice of proposed rulemaking (NPRM); reopening of comment period.

**SUMMARY:** We are revising an earlier proposed airworthiness directive (AD) for certain Piper Aircraft, Inc. Model PA-31-350 airplanes. The NPRM proposed to require inspecting the fuel hose assembly and the turbocharger support assembly for proper clearance between them, inspecting each assembly for any sign of damage, and making any necessary repairs or replacements. The NPRM was prompted by a report of an engine fire caused by a leak in the fuel pump inlet hose. This action revises the NPRM by requiring the use of revised procedures in a new service bulletin. We are proposing this supplemental NPRM (SNPRM) to correct the unsafe condition on these products. Since these actions impose an additional burden over that proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on these proposed changes.

**DATES:** We must receive comments on this SNPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; fax: (772) 978-6573; Internet: [www.piper.com/home/pages/Publications.cfm](http://www.piper.com/home/pages/Publications.cfm). You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0338; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Gary Wechsler, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5575; fax: (404) 474-5606; email: gary.wechsler@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0338; Directorate Identifier 2014-CE-010-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to certain Piper Aircraft, Inc. Model PA-31-350 airplanes. The NPRM published in the Federal Register on June 3, 2014 (79 FR 31888). The NPRM proposed to require inspecting the fuel hose assembly and the turbocharger support assembly for proper clearance between them, inspecting each assembly for any sign of damage, and making any necessary repairs or replacements.

### **Actions Since Previous NPRM was Issued**

Since we issued the NPRM (79 FR 31888, June 3, 2014), Piper Aircraft, Inc. has revised the related service information to clarify which engines are part of the airplane applicability and to revise the accomplishment instructions for inspecting for proper clearance between the fuel hose assembly and the turbocharger support assembly, inspecting the fuel hose assembly and the turbocharger support assembly for any signs of damage, and taking all necessary corrective actions.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comment received on the NPRM (79 FR 31888, June 3, 2014) and the FAA's response to the comment.

### **Request to Change the Applicability of the AD**

Joe Miller of Werbelow's Air Ventures, Inc., requested that the Applicability section of the AD be changed so that it applies only to Piper Aircraft, Inc. Model PA-31-350 airplanes with TIO-540-J2B engine configurations.

The commenter stated that Model PA-31-350 airplanes configured with TIO-540-J2B engines have fuel pumps orientated such that their inlet fuel hose assemblies can adversely contact a nearby turbocharger support assembly. The commenter also stated that the other type certificated engine configurations of applicable Model PA-31-350 airplanes have engine fuel pumps orientated such that their inlet fuel hose assemblies cannot adversely contact the nearby turbocharger support assembly.

The commenter requested that the AD exclude Model PA-31-350 airplanes that have the fuel pump installed on a Lycoming (L)TIO-540-J2BD engine.

We partially agree with the commenter. We agree that there is more than one orientation for the engine fuel pump in the applicable Model PA-31-350 airplanes with (L)TIO-540 series engines because this is shown in the Lycoming parts catalog for the TIO, LTIO-540-J2B, and –J2BD engines, which were type certificated on the Model PA-31-350 airplane.

We disagree with the commenter's request to change the actions of the AD so that they apply only to the inlet hose assembly for the engine fuel pump of the TIO-540-J2B engine configuration of applicable Model PA-31-350 airplanes. We reviewed the Lycoming parts catalog for the TIO, LTIO-540-J2B, and –J2BD engines and applicable Model PA-31-350 airplanes with (L)TIO-540-J2BD engines and found that the TIO and LTIO-540-J2B and –J2BD engines each have a fuel pump with one fuel hose assembly (either an inlet or exit) that can be incorrectly installed so that it is in contact with the nearby turbocharger support assembly.

#### **Related Service Information under 1 CFR part 51**

We reviewed Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015. The service information describes procedures for the following. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this SNPRM.

- Inspecting for a minimum 3/16-inch clearance between the fuel hose assembly and the turbocharger support assembly and making any necessary adjustments.
- Inspecting the fuel hose assembly for any signs of damage and, if necessary, replacing with a serviceable part.
- Inspecting the turbocharger support assembly for any signs of damage and, if necessary, repairing or replacing with a serviceable part.

- Performing an engine run-up to check for any leaks.

### **FAA's Determination**

We are proposing this SNPRM because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design. Certain changes described above expand the scope of the NPRM (79 FR 31888, June 3, 2014). As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

### **Proposed Requirements of this SNPRM**

This SNPRM would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between this Proposed AD and the Service Information.”

### **Differences Between this SNPRM and the Service Information**

There are differences between the compliance times for the corrective actions in this proposed AD and those in the related service information.

We based the compliance times in this proposed AD on risk analysis and cost impact to operators. There has only been one event of the reported incident in the operational history of Piper Model PA-31-350 airplanes. Cost was also a strong consideration due to the age of the fleet and the number of airplanes still in service.

The one-time inspection required in this proposed AD is very inexpensive and requires minimal time to accomplish. It is expected that almost all airplanes in service can be cleared with a single inspection, and no additional actions or costs would be incurred by the vast majority of the fleet.

We determined that a single inspection with any necessary corrective actions is an adequate terminating action for the unsafe condition. The risk related to future

maintenance on the fuel line would be mitigated by the related service information and awareness from this proposed AD.

### Costs of Compliance

We estimate that this proposed AD affects 773 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect for proper clearance between the fuel hose assembly and the turbocharger support assembly	.5 work-hour X \$85 per hour = \$85	N/A	\$42.50	\$32,852.50
Inspect the fuel hose assembly for evidence of leaking, cracking, chafing, and any other sign of damage	.5 work-hour X \$85 per hour = \$42.50	N/A	\$42.50	\$32,852.50
Inspect the turbocharger support assembly for evidence of chafing and any other sign of damage	.5 work-hour X \$85 per hour = \$42.50	N/A	\$42.50	\$32,852.50
Engine run-up/leak check	1 work-hour X \$85 = \$85 (.5 work hour per engine)	N/A	\$85	\$65,705

We estimate the following costs to do any necessary follow-on actions that will be required based on the results of the inspection. We have no way of determining the number of airplanes that might need these corrective actions.

#### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Adjust routing of fuel hose assembly for proper clearance between the fuel hose assembly and	5.5 work-hours X \$85 per hour = \$467.50	N/A	\$467.50

Action	Labor cost	Parts cost	Cost per product
the turbocharger support assembly			
Replace Piper fuel pump inlet hose assembly, part number 39995-34 (2 per airplane)	1 work-hour X \$85 per hour = \$85	\$1,068	\$1,153

Replace Lycoming turbocharger support assembly, part number LW-18302 (2 per airplane)	24 work-hours X \$85 per hour = \$2,040	\$12,874	\$14,914
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### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Piper Aircraft, Inc.:** FAA-2014-0338; Directorate Identifier 2014-CE-010-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Piper Aircraft, Inc. Model PA-31-350 airplanes, serial numbers 31-5001 through 31-5004, 31-7305005 through 31-8452024, and 31-8253001 through 31-8553002, certificated in any category, that are equipped with the following engines and fuel pump hose assemblies:

**Table 1 to paragraph (c) of this AD –**  
**Applicable Engines and Fuel Pump Hose Assemblies**

<b>Engine</b>	<b>Manufacturer's Hose Name</b>	<b>Manufacturer's Part Number (P/N)</b>	<b>Hose Description</b>
TIO-540-J2B (right wing)	Hose Assembly – Fuel	Piper 39995-034	Inlet fuel hose to engine fuel pump
LTIO-540-J2B (left wing)	Hose, Fuel pump to Injector	Lycoming LW-12877-6S142	Exit fuel hose from engine fuel pump
TIO540-J2BD (right wing)	Hose, Fuel pump to Injector	Lycoming LW-12877-6S142	Exit fuel hose from engine fuel pump
LTIO-540-J2BD (left wing)	Hose Assembly – Fuel	Piper 39995-034	Inlet fuel hose to engine fuel pump

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 73: Engine Fuel and Control.

**(e) Unsafe Condition**

This AD was prompted by a report of an engine fire caused by a leak in the fuel pump inlet hose. We are issuing this AD to correct the unsafe condition on these products.

**(f) Compliance**

Comply with this AD within the compliance times specified in paragraphs (g)(1) through (j)(2) of this AD, unless already done

**(g) Ensure Proper Clearance Between the Fuel Hose Assembly and the Turbocharger Support Assembly**

(1) Within the next 60 hours time-in-service (TIS) after the effective date of this AD or within the next 6 months after the effective date of this AD, whichever occurs first, inspect to determine the clearance between the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD, and each turbocharger support assembly,

Lycoming P/N LW-18302. There should be a minimum 3/16-inch clearance. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (g)(1) of this AD, if the measured clearance is less than 3/16-inch, make all necessary adjustments to make the clearance a minimum of 3/16-inch between the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD and each turbocharger support assembly, Lycoming P/N LW-18302, following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

**(h) Visually Inspect the Fuel Hose Assembly and Replace if Necessary**

(1) Within the next 60 hours TIS after the effective date of this AD or within the next 6 months after the effective date of this AD, whichever occurs first, visually inspect the inlet and exit fuel hose assemblies listed in table 1 to paragraph (c) of this AD for evidence of leaking, cracking, chafing, and any other sign of damage. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (h)(1) of this AD, if any evidence of leaking, cracking, chafing, or any other sign of damage is found in any inlet or exit fuel host assembly listed in table 1 to paragraph (c) of this AD, replace the fuel hose assembly with a serviceable part. Do the replacement following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

**(i) Visually Inspect the Turbocharger Support Assembly and Replace if Necessary**

(1) Within the next 60 hours TIS after the effective date of this AD or within the next 6 months after the effective date of this AD, whichever occurs first, visually inspect each turbocharger support assembly, Lycoming P/N LW-18302, for evidence of chafing

and any other signs of damage. Do the inspection following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) Before further flight after the inspection required in paragraph (i)(1) of this AD, if any evidence of chafing or any other sign of damage is found on any turbocharger support assembly, replace Lycoming P/N LW-18302 with a serviceable part. Do the replacement following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

**(j) Engine Run-Up**

(1) If any fuel line component was adjusted or replaced during any actions required in paragraphs (g)(1) through (i)(2) of this AD, before further flight, perform an engine run-up on the ground to check for leaks. Do the engine run-up following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

(2) If any leaks found during the engine run-up required in paragraph (j)(1) of this AD emanate from any fuel line component adjusted, repaired, or replaced during any actions required in paragraphs (g)(1) through (i)(2) of this AD, before further flight, take all necessary corrective actions following the INSTRUCTIONS section of Piper Aircraft, Inc. Service Bulletin No. 1257A, dated August 4, 2015.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(1) Related Information**

(1) For more information about this AD, contact Gary Wechsler, Aerospace Engineer, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5575; fax: (404) 474-5606; email: gary.wechsler@faa.gov.

(2) For service information identified in this AD, contact Piper Aircraft, Inc., 926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; fax: (772) 978-6573; Internet: [www.piper.com/home/pages/Publications.cfm](http://www.piper.com/home/pages/Publications.cfm). You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on January 16, 2016.

Melvin Johnson,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service

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